

(72) MURPHY, MICHAEL E., US

(72) MARXEN, MICHAEL R., US

(72) DWYER, DANIEL J., US

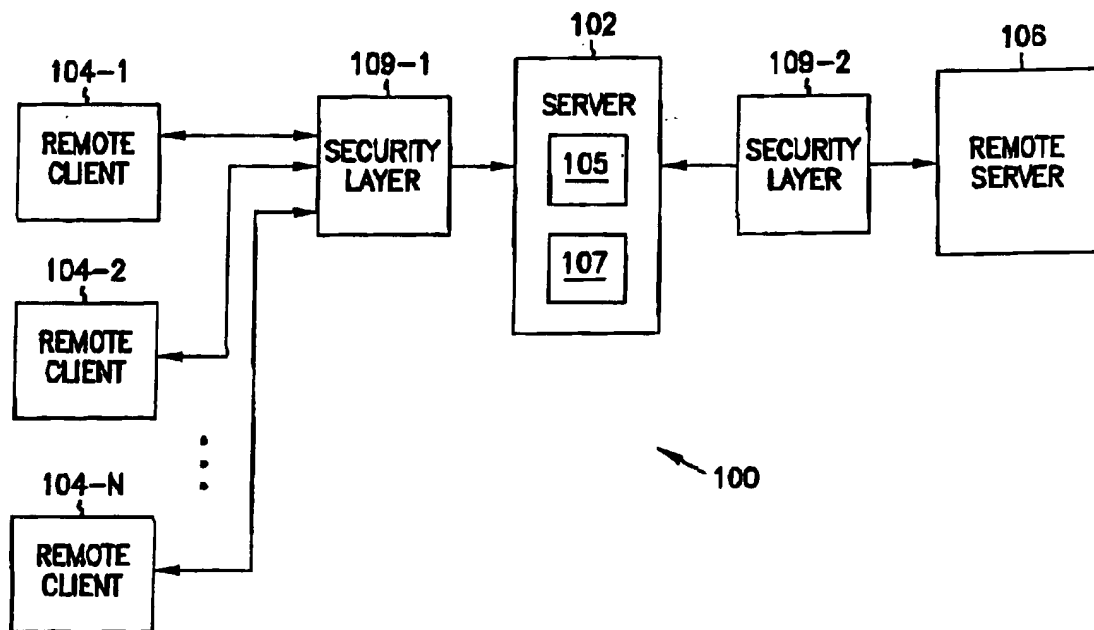
(71) NETZEE, INC., US

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(54) SYSTEMES ET METHODES DE MODELISATION FINANCIERE

(54) SYSTEMS AND METHODS FOR FINANCIAL MODELING



(57) Systems and methods are provided through which an organization can perform more timely and accurate analysis of its current financial holdings and perform better forecasting of proposed financial changes. The present invention allows an organizational user to perform real-time financial modeling over a secure data network. In particular, an illustrative embodiment of the present invention includes a system facilitating Internet financial modeling. The system includes a server coupled to the Internet. A website is stored on the server. Further software means are included which are operative on the website. The software means allows a user running a client program at a remote client coupled to the Internet to electronically transmit on-line a data file from the user in a non-aggregate format, and perform a number of financial analyses on the data file. In one embodiment, the software means operative on the website for performing a number of financial analyses on the data file includes modifying a return rate for a balance sheet liability or asset. In one embodiment, the software means operative on the website for performing a number of financial analyses on the data file includes entering a new product into a simulation file. In one embodiment, the software means operative on the website for performing a number of financial analyses on the data file includes performing an income at risk analysis using a beta factor.

Abstract of the Disclosure

Systems and methods are provided through which an organization can perform more timely and accurate analysis of its current financial holdings and perform better forecasting of proposed financial changes. The present invention
5 allows an organizational user to perform real-time financial modeling over a secure data network.

In particular, an illustrative embodiment of the present invention includes a system facilitating Internet financial modeling. The system includes a server coupled to the Internet. A website is stored on the server. Further software means
10 are included which are operative on the website. The software means allows a user running a client program at a remote client coupled to the Internet to electronically transmit on-line a data file from the user in a non-aggregate format, and perform a number of financial analyses on the data file. In one embodiment, the software means operative on the website for performing a number of financial
15 analyses on the data file includes modifying a return rate for a balance sheet liability or asset. In one embodiment, the software means operative on the website for performing a number of financial analyses on the data file includes entering a new product into a simulation file. In one embodiment, the software means operative on the website for performing a number of financial analyses on the data
20 file includes performing an income at risk analysis using a beta factor.

SYSTEMS AND METHODS FOR FINANCIAL MODELING

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Field of the Invention

The present invention relates generally to the field of electronic commerce. More particularly, the present invention relates to systems and methods for financial modeling using the Internet.

Background

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The Internet has become a tremendous information resource tool. Even more, the Internet is a powerful agent which is transforming the way nearly every product and service is sold or provided. With countless Internet service providers proliferating at an extremely rapid rate, the competition to develop consumer loyalty and hold the consumer's attention for repeat business is

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critical. Service and accessibility is also critical.

On-line financial services are becoming numerous such as on-line trading, on-line banking, and on-line mortgage services. Organizations needing to manage financial portfolios, e.g. lending institutions, private corporations, insurance companies, municipal organizations, and charitable groups are looking
20 more and more to on-line mechanisms which can assist in providing on-line services and aid in financial decision making. For example, between banks, the effort to attract and retain deposits has become increasingly difficult in view of the number of competing services and resources, thus many banks have begun to offer on-line transactions. To date on-line services can facilitate on-line
25 transactions for a customer of the organization, but lack the ability to offer the organization with a customized, or personalized, resource analysis tool for its own financial data. Banks, by way of example and not by way of limitation, need to be able to evaluate their current products and services as well as to analyze offering new products and services in order to promote growth,
30 strengthen their current financial position, and diversify their portfolios.

One conventional manner in which banks perform the above is to submit call reports to service bureaus which then externally perform analyses for the bank. Traditionally banks submitted such call reports in hard copy, e.g. paper, form. The service bureau would then use the paper reports and go through data

entry to key in the data from those reports into the service bureaus data analysis software. In this method, a time delay is involved in obtaining the analyses back from the service bureau such that real time integration of new strategies or formulae is not possible. Also, the data submitted as call reports does not
5 accurately isolate individual optionality features on the bank's various product so that the return analysis does not provide a true cash flow based report.

More recently, organizations wishing to perform financial analyses have been able to purchase software packages from different service bureaus to install on their own systems. However, such software packages are expensive and
10 require a great deal of on-site technical support which can prove too costly for smaller organizations. Still other service bureaus have begun providing the means through which organizations can electronically transmit data files to the service bureau. However, this requires that the organization submit the file data in a compatible format for the system employed by the service bureau.

15 Numerous service bureaus are adapted to perform isolated industry financial analyses for specific organizations from amongst the wide range of organizations mentioned above. However, no single service bureau can accommodate the financial modeling needs across this broad spectrum of organizations. Moreover, the mechanisms employed by such different industry
20 specific service bureaus all suffer similar drawbacks to those outlined in the banking scenario, e.g. timeliness, accuracy, and cost.

For the reasons stated above, and for other reasons stated below which will become apparent to those skilled in the art upon reading and understanding the present specification, it is desirable to develop systems and methods which
25 can afford greater flexibility in analyzing financial holdings and more timely forecasting and analysis of new strategies and formulae.

Summary of the Invention

The above mentioned problems associated with financial modeling and analysis and other problems are addressed by the present invention and will be
30 understood by reading and studying the following specification. Systems and methods are described which afford organizations greater flexibility and accuracy in analyzing current financial holdings and better forecasting and implementation of proposed strategies and financial changes.

In particular, an illustrative embodiment of the present invention includes a system and method for facilitating Internet financial modeling. The system includes a server coupled to the Internet. A website is stored on the server. Further software means are included which are operative on the website. The software means allows a user running a client program at a remote client coupled to the Internet to electronically transmit on-line a data file from the user in a non-aggregate format, e.g. in an ASCII format, and perform a number of financial analyses on the data file. In one embodiment, the software means operative on the website for performing a number of financial analyses on the data file includes modifying a return rate, or interest rate, for a balance sheet liability or asset. In one embodiment, the software means operative on the website for performing a number of financial analyses on the data file includes entering a new product into a simulation file. In one embodiment, the software means operative on the website for performing a number of financial analyses on the data file includes performing an income at risk analysis using a beta factor.

These and other embodiments, aspects, advantages, and features of the present invention will be set forth in part in the description which follows, and in part will become apparent to those skilled in the art by reference to the following description of the invention and referenced drawings or by practice of the invention. The aspects, advantages, and features of the invention are realized and attained by means of the instrumentalities, procedures, and combinations particularly pointed out in the appended claims.

Brief Description of the Drawings

Figure 1 is an illustration of a system according to the teachings of the present invention.

Figure 2 is a diagram of a hardware and operating environment in conjunction with which embodiments of the invention may be practiced.

Figure 3 is a more detailed diagram of the system of Figure 1 according to the teachings of the present invention.

Figures 4A and 4B are flow charts illustrating one method embodiment according to the teachings of the present invention.

Figure 5 is a flow chart illustrating another method embodiment according to the teachings of the present invention.

Figures 6-13C are screen shots illustrating an embodiment of the functionality of the systems and methods according to the teachings of the present invention.

Detailed Description

5 In the following detailed description, reference is made to the accompanying drawings which form a part hereof, and in which is shown by way of illustration specific illustrative embodiments in which the invention may be practiced. These embodiments are described in sufficient detail to enable those skilled in the art to practice the invention, and it is to be understood that other
10 embodiments may be utilized and that logical, mechanical and electrical changes may be made without departing from the spirit and scope of the present invention. The following detailed description is, therefore, not to be taken in a limiting sense.

Figure 1 is an illustration of a system 100 according to the teachings of
15 the present invention. The system 100 includes an Internet network system 100. In Figure 1, the system 100 includes a server 102. Server 102 includes a processor 105 coupled to a data storage device 107. The system 100 further includes a number of remote clients 104-1, 104-2, . . . , 104-N each including a client program, or software means, which is operatively or communicatively
20 coupled to the server 102. In one embodiment, the number of remote clients 104-1, 104-2, . . . , 104-N are operatively coupled to the server 102 through a first security layer 109-1, or secure data network 109-1. In another embodiment, the number of remote clients 104-1, 104-2, . . . , 104-N each including a client program, or software means, include software which provide security at the
25 number of remote clients 104-1, 104-2, . . . , 104-N. In one embodiment the number of remote clients 104-1, 104-2, . . . , 104-N are coupled to the server 102 over a local area network (LAN), e.g. an Ethernet network. In an alternative embodiment, the number of remote clients 104-1, 104-2, . . . , 104-N are coupled to the server 102 over a wide area network (WAN). Also the number of remote
30 clients 104-1, 104-2, . . . , 104-N can be coupled to the server 102 over the public switched telephone network (PSTN) and/or the Internet. In one embodiment, by way of example and not by way of limitation, the number of remote clients 104-

1, 104-2, . . . , 104-N can communicate with one another and the server 102 using transmission control protocol/Internet protocol (TCP/IP).

The system 100 can further include coupling, as described above to additional servers and systems 106, such as servers and systems 106 maintained
5 by other organizations. Such systems are known and understood by one of ordinary skill in the art. In one embodiment, the additional servers and systems 106 include core databases accessible by the server 102. For example, the additional servers and systems 106 can include databases and executable instructions which operate on the file data of third party or outside organizations
10 and/or possess PSTN processing and routing capabilities. In one embodiment, the additional servers and systems 106 include proprietary databases and data modules maintained by third party or outside organizations. In one embodiment, the additional servers and systems 106 are similarly coupled to the server 102 through a second security layer 109-2, or secure data network 109-2 such that
15 file data from the additional servers and systems 106 can be exported to server 102. In one embodiment, the additional servers and systems 106 are coupled to the server 102 over a local area network (LAN), e.g. an Ethernet network. In an alternative embodiment, the additional servers and systems 106 are coupled to the server 102 over a wide area network (WAN). Also the additional servers and
20 systems 106 can be coupled to the server 102 over the public switched telephone network (PSTN) and/or the Internet. In one embodiment, by way of example and not by way of limitation, the additional servers and systems 106 can communicate with one another and the server 102 using transmission control protocol/Internet protocol (TCP/IP).

25 The server 102 can be coupled to third party or outside organizations and the additional servers and systems 106 in a direct hardwired fashion, e.g. hybrid fiber-coax connection and/or indirectly in a wireless fashion using remote electromagnetic signal transmission in the radio or microwave frequencies. In Figure 1, the server 102, the number of remote clients 104-1, 104-2, . . . , 104-N,
30 and the additional servers and systems 106 all include computer readable medium having computer-executable instructions. These computer readable medium include such devices as a disk drive for reading data storage media, e.g. a compact disc, and/or computer readable medium such as random access

memory (RAM) and read only memory (ROM). Similarly, the server 102, the number of remote clients 104-1, 104-2, . . . , 104-N, and the additional servers and systems 106 can all include a processor coupled to a data storage device.

Figure 2 is a diagram of a hardware and operating environment in conjunction with which embodiments of the invention may be practiced for the server 102, the number of remote clients 104-1, 104-2, . . . , 104-N, and the additional servers and systems 106 from Figure 1. The description of Figure 2 is intended to provide a brief, general description of suitable computer hardware and a suitable computing environment in conjunction with which the invention may be implemented. The invention is described in the general context of computer-executable instructions, such as program modules, being executed by a computer, such as a personal computer. Generally, program modules include routines, programs, objects, components, data structures, etc., that perform particular tasks or implement particular abstract data types.

Moreover, those skilled in the art will appreciate that the invention may be practiced with other computer system configurations, including hand-held devices, multi processor systems, microprocessor-based or programmable consumer electronics, network PCS, minicomputers, mainframe computers, and the like. The invention may also be practiced in distributed computer environments where tasks are performed by remote processing devices that are linked through a communications network. In a distributed computing environment, program modules may be located in both local and remote memory storage devices.

In the embodiment shown in Figure 2, the hardware and operating environment of the server 102 and/or the remote client 104 from Figure 1 includes a general purpose computing device in the form of a personal computer 20, or a server 20, including a processing unit 21, a system memory 22, and a system bus 23 that operatively couples various system components including the system memory 22 to the processing unit 21. There may be only one or there may be more than one processing unit 21, such that the processor of computer 20 comprises a single central-processing unit (CPU), or a plurality of processing units, commonly referred to as a parallel processing environment. The computer

20 may be a conventional computer, a distributed computer, or any other type of computer; the invention is not so limited.

The system bus 23 can be any of several types of bus structures including a memory bus or memory controller, a peripheral bus, and a local bus using any of a variety of bus architectures. The system memory can also be referred to as simply the memory, and includes read only memory (ROM) 24 and random access memory (RAM) 25. A basic input/output system (BIOS) 26, containing the basic routines that help to transfer information between elements within the computer 20, or a server 20, such as during start-up, may be stored in ROM 24.

10 The computer 20, or a server 20 further includes a hard disk drive 27 for reading from and writing to a hard disk, not shown, a magnetic disk drive 28 for reading from or writing to a removable magnetic disk 29, and an optical disk drive 30 for reading from or writing to a removable optical disk 31 such as a CD ROM or other optical media.

15 The hard disk drive 27, magnetic disk drive 28, and optical disk drive 30 couple with a hard disk drive interface 32, a magnetic disk drive interface 33, and an optical disk drive interface 34, respectively. The drives and their associated computer-readable media provide non volatile storage of computer-readable instructions, data structures, program modules and other data for the

20 computer 20, or a server 20. It should be appreciated by those skilled in the art that any type of computer-readable media which can store data that is accessible by a computer, such as magnetic cassettes, flash memory cards, digital video disks, Bernoulli cartridges, random access memories (RAMs), read only memories (ROMs), and the like, can be used in the exemplary operating

25 environment.

A number of program modules can be stored on the hard disk, magnetic disk 29, optical disk 31, ROM 24, or RAM 25, including an operating system 35, one or more application programs 36, other program modules 37, and program data 38. A plug in containing a search engine for the present invention can be

30 resident on any one or number of these computer-readable media.

A user may enter commands and information into the personal computer 20, or server 20 through input devices such as a keyboard 40 and pointing device 42. Other input devices (not shown) can include a microphone, joystick, game

pad, satellite dish, scanner, or the like. These other input devices are often connected to the processing unit 21 through a serial port interface 46 that is coupled to the system bus 23, but can be connected by other interfaces, such as a parallel port, game port, or a universal serial bus (USB). A monitor 47 or other
5 type of display device can also be connected to the system bus 23 via an interface, such as a video adapter 48. The monitor 40 can display a graphical user interface for the user. In addition to the monitor 40, computers typically include other peripheral output devices (not shown), such as speakers and printers.

10 As explained in connection with Figure 1, the computer 20, or server 20 may operate in a networked environment using logical connections to one or more remote computers or servers, such as remote computer 49. These logical connections are achieved by a communication device coupled to or a part of the computer 20, or server 20; the invention is not limited to a particular type of
15 communications device. The remote computer 49 can be another computer, a server, a router, a network PC, a client, a peer device or other common network node, and typically includes many or all of the elements described above relative to the computer 20, or server 20, although only a memory storage device 50 has been illustrated in Figure 2. The logical connections depicted in Figure 2 include
20 a local area network (LAN) 51 and a wide area network (WAN) 52. Such networking environments are commonplace in office networks, enterprise-wide computer networks, intranets and the Internet, which are all types of networks.

When used in a LAN-networking environment, the computer 20, or server 20, is connected to the LAN 51 through a network interface or adapter 53,
25 which is one type of communications device. When used in a WAN-networking environment, the computer 20, or server 20, typically includes a modem 54, a type of communications device, or any other type of communications device, e.g. a wireless transceiver, for establishing communications over the wide area network 52, such as the Internet; the invention is not so limited. The modem 54,
30 which may be internal or external, is connected to the system bus 23 via the serial port interface 46. In a networked environment, program modules depicted relative to the personal computer 20, or portions thereof, can be stored in the remote memory storage device 50 of remote computer, or server 49. It is

appreciated that the network connections shown are exemplary and other means of and communications devices for establishing a communications link between the computers may be used.

5 The hardware and operating environment in conjunction with which embodiments of the invention may be practiced has been described. The computer 20, or server 20, in conjunction with which embodiments of the invention can be practiced can be a conventional computer, a distributed computer, or any other type of computer; the invention is not so limited. Such a computer 20, or server 20, typically includes one or more processing units as its
10 processor, and a computer-readable medium such as a memory. The computer 20, or server 20, can also include a communications device such as a network adapter or a modem, so that it is able to communicatively couple to other computers, servers, or devices.

Figure 3 is a more detailed diagram of the system 100 interaction of
15 Figure 1 according to the teachings of the present invention. In Figure 3, the system 300 includes server 301. The server 301 in the system 300 includes a processor 302 coupled to a storage device 304. The system further includes software means 303 operative on the processor 302, the remote client 312 having a client program, and the additional servers and systems 306-1, 306-2, etc., to
20 perform methods according to the teachings of the present invention. The software means 303 includes a novel software program, including interface protocols, application programs, and program modules for carrying out the methods of the present invention. According to the teachings of the present invention, the software means includes a financial analysis module 305 suitable
25 for implementing changes to and performing analyses on any number of client data files. Also, according to the teachings of the present invention, the software program includes a filter module 307 suitable for reading a parsed data file such as a data file parsed from an ASCII format, organizing that parsed data file into an organized, customizable client data file, and making that organized,
30 customizable client data file accessible to a remote client over the Internet. According to the teachings of the present invention, the filter module 307 and the financial analysis module 305 contain application programs, and/or make up portions of application programs, which can be stored in the storage device.

Similarly, the organized, customizable client data file can be stored in storage device 304 on server 301. The novel software program according to the teachings of the present invention can be executed on system 300. The software means 303 can be resident on the server as shown in Figure 3, or alternatively, 5 the software means can be resident on any number of the storage devices, e.g. computer readable medium, coupled in system 300. One of ordinary skill in the art will understand the manner in which a software program can be launched from a computer readable medium in a computer based system to execute the functions defined in the software program. One of ordinary skill in the art will 10 further understand the various programming languages which may be employed to create a software program designed to implement and perform the methods of the present invention. In one embodiment, much of the application software is implemented using object oriented programming, hyper-text mark-up language (HTML) and the like. However, the teachings of the present invention are not 15 limited to a system using object oriented programming and no embodiment of the invention is limited to a particular programming language or environment.

System 300 facilitates Internet financial modeling services for any number of organizational clients. Server 301 includes a database, or first database 308 having a set of resident data in various data structures, and another 20 database, or second database 310, having a number of linked web pages 310 in the storage device which are downloadable and displayable to a client program at a remote client 312 having a graphical user interface, e.g. computer 20 and monitor 47. In one embodiment of Figure 3, the database 308 in server 301 includes a database of a number of client files, e.g. the organized, customizable 25 client data files. The number of linked web pages 310 can be used to download and display a particular client's organized, customizable data file at a remote client 312 having a graphical user interface. In one embodiment, as will be understood by one of ordinary skill in the art upon reading this disclosure, each client file can include a number of different or similar client data files. In one 30 embodiment, by way of illustration and not by way of limitation, each client file is an organized system data file including assets, liabilities and return rates. Also, in one embodiment, a client file can include an organized system data file including equity holding or another number of data fields particular to a given

industry or organization. In one embodiment, by way of illustration and not by limitation, the assets can include loan products maintained by a bank and/or investments such as an investment portfolio maintained by an organization. In one embodiment, by way of illustration and not by limitation, the liabilities can
5 include non-maturity based demand deposit accounts and/or time based deposit accounts, such as certificates of deposits maintained by a bank. In one embodiment, by way of illustration and not by limitation, the return rates can include payable interest rates or offering rates and/or receivable interest rates such as those which would be paid to an organization on investments.

10 According to the teachings of the present invention, the organized system data file, or organized, customizable client data file, in the database includes a cash flow based organized system data file which is organized to identify a number of optionality features for the assets, liabilities and return rates. For example, the identification of a number of optionality features can be explained
15 as follows. On a number of loan assets held in a particular bank client data file, the organized system data file identifies and accounts for the individualized loans to more accurately reflect the full range of optional features for different types of loan assets. That is, the organized system data file accounts for loans which have certain caps, certain floors, particular call or maturity features, and
20 loans that do not have certain caps, certain floors, particular call or maturity features and the like. In operation the financial analysis module 305 suitable for implementing changes to and performing analyses on the client data file recognizes and accounts for these optionality features when performing analyses on the client data file. In other words, the software means 303 reflects these
25 variable factors in performing any simulation or cash flow type analysis on a given data file. Similarly, as one of ordinary skill in the art will understand upon reading this disclosure, the cash flow based organized system data file which is organized to identify a number of optionality features can reflect a number of optionality features or a range in features in a number of products offered in
30 industries other than banking. Here too, the software means reflects these variable factors in performing any simulation or cash flow type analysis on the particular data file. Conventional software analysis programs do not isolate these individualized features within a given class of products and thus are not

able to provide a true cash flow based analysis, but instead provide only a more generalized financial picture.

In Figure 3, the number of linked web pages 310 in the storage device 304 of server 302 includes at least one web page/website, or first web page, which has a data field for entering a beta factor, or a number of beta factors, for performing an analysis of a client file using the financial analysis module 305. Figure 6 is a screen shot illustrating an embodiment of such a first web page according to the teachings of the present invention. In one embodiment, the number of linked web pages 310 in the storage device 304 of server 302 includes at least one web page/website, or second web page, as shown and further illustrated in Figure 7, which includes a listing of input file balances, or balance sheet composition for a client file. According to the teachings of the present invention, the financial analysis module 305 is operable on the listing of input file balances, and can be instructed with computer-executable instructions, e.g. from the remote client, to make changes and/or new entries to the balance sheet composition of a particular client file. In one embodiment, the number of linked web pages 310 in the storage device 304 of server 302 includes at least one web page/website, or third web page, as shown and further illustrated in Figure 8, which includes an income at risk report preview for a client file which is premised on the data contained in the client file, e.g. assets, liabilities and various, modifiable interest rates as well as beta variables on those interest rates. According to the teachings of the present invention, the financial analysis module 305 is operable on the income at risk report preview, and can be instructed from the remote client, to make changes and/or new entries to the income at risk report preview of a particular client file. In one embodiment, the number of linked web pages 310 in the storage device 304 of server 302 includes at least one web page/website, or fourth web page, as shown and further illustrated in Figure 9, which includes a market value at risk report preview for a client file which is premised on the data contained in the client file, e.g. a current market value for assets and liabilities in the client file as well as beta variable simulations and analysis on those market values. According to the teachings of the present invention, the financial analysis module 305 is operable on the market value at risk report preview, and can be instructed from the remote client,

to make changes and/or new entries to the market value at risk report preview of a particular client file. In one embodiment, the number of linked web pages 310 in the storage device 304 of server 302 includes at least one web page/website, or fifth web page, as shown and further illustrated in Figure 10, which includes a

5 historical performance analysis for a client file which is premised on the data contained in the client file, e.g. a historical performance analysis based on data representing the client's assets, liabilities and various, modifiable interest rates to illustrate a current financial performance vis-a-vis previous historical

10 performances. According to the teachings of the present invention, the financial analysis module 305 is operable on the historical performance analysis web page, and can be instructed from the remote client, to make changes and/or new entries to the historical performance analysis of a particular client file. In one embodiment, the number of linked web pages 310 in the storage device 304 of

15 server 302 includes at least one web page/website, or sixth web page, as shown and further illustrated in Figure 11, which includes a historical interest income analysis for a client file which is premised on the data contained in the client file, e.g. a historical interest income analysis based on data representing the client's assets, liabilities and various, modifiable interest rates to illustrate a current

20 interest income analysis vis-a-vis previous interest income performances. According to the teachings of the present invention, the financial analysis module 305 is operable on the historical interest income analysis web page, and can be instructed from the remote client, to make changes and/or new entries to the historical interest income analysis of a particular client file. In one

25 embodiment, the number of linked web pages 310 in the storage device 304 of server 302 includes at least one web page/website, or seventh web page, as shown and further illustrated in Figure 12, which includes a simulation status report preview based on data representing the client's file representing submitted simulations, completed simulations, and simulations which have been created, or built, but not executed. In one embodiment, the number of linked web pages 310

30 in the storage device 304 of server 302 includes at least one web page/website, or eighth web page, as shown and further illustrated in Figures 13A-13C, which includes a number of data fields for entering a new product and/or deleting a product, adding and/or deleting an expected return rate or interest rate and a

number of optionality features as described earlier, into a simulation file.
According to the teachings of the present invention, the financial analysis module 305 is operable on the simulation file, and can be instructed from the remote client, to read and implement data entered into the number of data fields
5 shown in Figures 13A-13C for a particular client file.

According to the teachings of the present invention, the software means 303 operable on the server 301 and the client program at the remote client 312 provides for inputting a beta factor and/or a number of beta factors or simulation variables (collectively "analysis variables") relating to a particular product class
10 or category, and using the financial analysis module for simulating an income at risk analysis, and simulating a market value at risk analysis using data in the client's organized system data file representing the particular, return rates, products in the data file, and the analysis variables. As one of ordinary skill in the art will understand upon reading this disclosure, the software means 303
15 operable on the server 301 and the client program at the remote client 312 further provides for using the financial analysis module 305 for simulating any number of other analysis variable changes, e.g. simulating the addition and/or deletion of products, and/or product optionality features, and/or modifying, adding, and deleting expected return rates using newly entered data as well as previous data
20 in the client's organized system data file representing the particular product class or category and the analysis variables.

As mention above, the server 301 further includes a filter module 307. The software means 303 operable on the server 301 and the client program at the remote client 312 is further operable on the filter module 307. The filter module
25 307 and software means 303 are operable for organizing a data file. The data file can be electronically transmitted, such as received on-line over the Internet, or received in any other storage medium, e.g. magnetic disk or CD. The data file is received in a non-aggregate format. As used in this specification, the term non-aggregate format is intended to mean a data file which is received as an ASCII
30 data file or as an equivalent to an ASCII data file. The filter module 307 uses a customizable template to reformat and customize the data file into the organized system data file, e.g. an organized, customizable format for a particular client's needs, for storage in the database, or storage device 304 of the server 301.

In one exemplary embodiment, the filter module 307 includes a product such as Data Junction, which is commercially available from Data Junction Corporation. In this embodiment, the filter module 307 receives the data file, either electronically transmitted on-line or read from another storage medium, as
5 an input data file in non-aggregate format from any client system. The filter module 307 operates on the input data file, e.g. an ASCII data file, functioning to parse out the input data file. The software means 303 and filter module 307, according to the teachings of the present invention, is operable to read the parsed input data file and reformat/customize the electronically transmitted data file into
10 the customizable, organized client data file, e.g. organized system data file for the particular client who is sending the data file. In this embodiment, the software means 303 and filter module 307 reads the codes in the parsed input data file, e.g. a Data Junction output format, to organize the data file into the organized system data file for the client. Further, the software means 303 and
15 filter module 307 operable on the server 301 and the client program at the remote client 312, in reformatting and customizing the input data file, provides for setting up a base case using the organized system data file. The software means 303, e.g. the financial analysis module 305, is further operable for entering and/or deleting products in the client's organized system data file, and/or
20 entering and/or deleting product optionality features, e.g. changing a current products features, and/or modifying, adding, and deleting expected return rates on the client's products using newly entered data, entered as computer-executable instructions, as well as using previous data in the client's organized system data file and using any of the stated analysis variables.

25 In one embodiment, the software means 303, e.g. the financial analysis module 305, is operable for performing a simulation, simulating a market value at risk analysis using the base case, and taking into account any entered and/or deleted products in the client's organized system data file, and/or entered and/or deleted product optionality features, and/or any modified, added, and deleted
30 expected return rates on the client's products the new product, as well as using any of the stated analysis variables. In one embodiment, the software means 303, e.g. the financial analysis module 305, is operable for simulating an income at risk analysis using the base case, and taking into account any entered and/or

deleted products in the client's organized system data file, and/or entered and/or deleted product optionality features, and/or any modified, added, and deleted expected return rates on the client's products, the new product, as well as using any of the stated analysis variables.

5 In one embodiment, the beta factor, e.g. analysis variable or variables, includes a beta factor for an increase and decrease in basis points for an expected return rate or interest rate. In one embodiment, entering a product into a simulation file includes entering a balance sheet asset into the simulation file. For example, and not by way of limitation, entering a balance sheet asset into the
10 simulation file includes entering a loan product or interest earning investment into the simulation file. In one embodiment, entering a new product into a simulation file includes entering a balance sheet liability into the simulation file. For example, and not by way of limitation, entering a balance sheet liability into the simulation file includes entering an interest payable obligation, e.g. a non-
15 maturity based demand deposit account with a particular interest rate, or offering rate, into the simulation file. As one of ordinary skill in the art will understand upon reading this disclosure, the same products listed above may similarly be deleted from the client's organized system data file. In one embodiment, the software means 303 is operable on the server 301 and the client program for
20 providing on-line system support, or server database support, and is operable over a secure data network.

 In one embodiment, the software means 303 operable on system 300 is further operable on the server 301, the client program at the remote client 312, and the additional servers and systems, e.g. 306-1, 306-2, etc., for comparing
25 financial models prepared for a particular client file in server 301 against those of a third party's or outside organization's financial analyses, and/or those third party's or outside organization's formulations for new financial holding strategies. In this embodiment, a third party or outside organization located at server 306-1, 306-2, etc., can view the organized system data file of a particular
30 client in the database 308 and offer a comparison from its own in-house financial analyses on its server, e.g. 306-1.

 According to the teachings of the present invention, the invention includes a computer readable medium, e.g. memory 22 and/or storage device

304, having computer executable instructions to cause a computer, e.g. remote client 312, server 301, and additional servers and systems 306-1, 306-2, . . . , 306-N, to perform methods which include accessing on-line a server database, e.g. storage device 304, which has a number of client files. Each client file is an
5 organized system data file, e.g. a customizable, organized client file including assets, liabilities and return rates, which is downloadable and displayable to a client program at the remote client 312 and can be operated upon by the financial analysis module 305. Each client file can contain a number of organized system data files. The methods include inputting a beta factor into the client program at
10 the remote client 312 for use by the financial analysis module 305 in performing an analysis on a portion or portions of a particular client file. The methods further include using the financial analysis module 305 for simulating an income at risk analysis and simulating a market value at risk on a portion or portions of a particular client file using the client's organized system data file, the beta factor,
15 and offering rates or return rates.

In one embodiment, the methods further include electronically receiving on-line a data file as an input data file transmitted from a user in a non-aggregate format as described above. This method further involves filtering the data file using the filter module 307. In this embodiment filtering the data file includes
20 reformatting, customizing and organizing the input data file received in the non-aggregate format from any number of different user platforms into an organized system data file for the client. In one embodiment, by way of example and not by way of limitation, the methods further include using the financial analysis module for modifying a return rate for a demand deposit account liability for a
25 client file.

The computer readable medium, e.g. memory 22 and/or storage device 304, having computer executable instructions includes instruction for causing a computer, e.g. remote client 312, server 301, and additional servers and systems 306-1, 306-2, . . . , 306-N, to perform methods of maintaining a server database
30 which has a number of client files. As described above, each client file is an organized system data file, e.g. a customizable, organized client file including assets, liabilities and return rates, which is downloadable and displayable to a client program at a remote client 312. The methods include using the filter

module 307 and the financial analysis module 305 for setting up a base case using the organized system data file. And, the methods further include using the financial analysis module 305 for changing a number of features of an organized system data file or files, for a particular client, within a simulation file. Using
5 the financial analysis module 305 for changing a number of features of an organized system data file within a simulation file includes entering a new product into a simulation file. In one embodiment the methods further include inputting a beta factor into the simulation file for use by the financial analysis module 305 on a particular client file. In this embodiment, the methods include
10 using the financial analysis module 305 for simulating a market value at risk analysis on a particular client file using the base case, the new product, the beta factor, and an offering rate or return rate. As explained above, simulating a market value at risk analysis using the base case, the new product, and the beta factor includes simulating a market value at risk analysis on a particular client
15 file that accounts for a number of optionality features, e.g. optionality features on the assets, liabilities and return rates of a client file. Also in this embodiment, the methods further include using the financial analysis module 305 for simulating an income at risk analysis on a particular client file using the base case, the new product, the beta factor, and an offering rate or return rate.
20 Inputting a beta factor into the simulation file includes inputting a beta factor representing an increase and decrease in basis points for an expected return rate on a product. Entering a new product into a simulation file includes entering a balance sheet asset into the simulation file. Entering a new product into a simulation file can also include entering a balance sheet liability into the
25 simulation file. According to the teachings of the present invention, using the financial analysis module 305 for changing a number of features of an organized system data file within a simulation file similarly includes using the same methods for deleting a product from the simulation file, changing optionality features as described herein, and changing return rates. The software means 303
30 is further operable for taking a number of changes, e.g. the changed number of features, made using the financial analysis module 305 on the simulation file and implementing these changes as a permanent file, such as an

additional/subsequent file or a replacement file, into the organized system data file or files of a particular client.

According to the teachings of the present invention, the invention includes a system 300 which includes a server 301 coupled to the Internet, a website 310 stored on the server 310, and software means 303 operative on the website 310. According to the invention, the software means 303 allows a user running a client program at a remote client 312 coupled to the Internet to electronically transmit on-line a data file from the user in a non-aggregate format. The software means receives the data file and performs a number of financial analyses on the data file. In one embodiment, the software means 303 operative on the website which performs a number of financial analyses on the data file includes modifying an offering rate for a balance sheet liability. In one embodiment, the software means 303 operative on the website which performs a number of financial analyses on the data file includes entering a new product into a simulation file. And, in one embodiment according to the teachings of the present invention, the software means 303 operative on the website which performs a number of financial analyses on the data file includes performing an income at risk analysis using a beta factor.

Methods according to the Present Invention

As explained in connection with Figures 1, 2, and 3, the present invention is implemented using computer based systems which have computer readable medium for executing instructions from software means, e.g. programs, for carrying out the above described embodiments. These embodiments include methods for facilitating Internet financial modeling and forecasting for any number of organizations having financial portfolios. These embodiments further include methods for facilitating electronic commerce and providing associated organizational services, e.g. providing financial reports and statistics which the organizational user can immediately use to implement new programs and financial strategies. The scope of the present invention includes other method embodiments which will be understood by one of ordinary skill in the art upon reading this disclosure.

The system explained in connection with Figures 1, 2, and 3, comprises a processor, a storage device coupled to the processor, and software means

operative on the processor, e.g. system collectively, for providing financial modeling. The system more broadly includes the server 301, the client program at the remote client 312, and the additional servers and systems, e.g. 306-1 with the software means, e.g. software program, executing on the system. The
5 software program will implement the methods described above and well as those presented below.

Figures 4A and 4B are flow charts illustrating one method embodiment according to the teachings of the present invention. Figure 4A and 4B represent one flow model according to the teachings of the present invention. However, as
10 one of ordinary skill in the art will understand upon reading the present disclosure, sequence provided in Figure 4B can equally precede the sequence of steps shown in Figure 4A. The method embodiment provided in Figure 4A incorporates the software means having computer executable instructions described above. The software means are employed by a user at a remote client
15 for accessing on-line a server database which has a number of client files at 410. In one embodiment, accessing on-line a server database includes accessing on-line the server database over a secure data network. Each client file is an organized system data file, e.g. a customizable, organized data file including assets, liabilities and return rates, as described earlier, which is downloadable
20 and displayable to a client program at the remote client. The methods further include inputting a beta factor into the client program at the remote client at 420. The methods further include simulating an income at risk analysis using the organized system data file and the beta factor at 430. This method includes displaying the income at risk report on a graphical user interface at the remote
25 client. In one embodiment, the method further includes simulating a market value at risk using the organized system data file and the beta factor.

In one embodiment, the software means are operable on the server and remote client for displaying a historical performance analysis on a graphical user interface at the remote client. Similarly, the software means are operable for
30 displaying a balance sheet composition on a graphical user interface at the remote client.

Figure 4B, incorporates the software means having computer executable instructions described above for electronically transmitting on-line a data file

from a user in a non-aggregate format, as described previously, at 440. This method includes filtering the data file at 450. This method further includes organizing the data file into an organized system data file from the non-aggregate format from any number of different user platforms at 460. In one embodiment, the methods shown in Figure 4A and 4B further include modifying a return rate for a liability in a client file.

Figure 5 is a flow chart illustrating another method embodiment according to the teachings of the present invention. The method embodiment provided in Figure 5, incorporates the software means having computer executable instructions described above. The software means are employed for maintaining a server database which has a number of client files which are organized system data files at 510. As stated above, each client file is an organized system data file, e.g. a customizable, organized data file including assets, liabilities and return rates, and which is downloadable and displayable to a client program at a remote client. The methods performed by the software means include setting up a base case using the organized system data file at 520. In one embodiment, this method further includes providing on-line system, or server database, support. The methods performed by the software means further include entering a new product into a simulation file and/or the organized system data file at 530. In one embodiment, entering a new product into a simulation file includes entering a balance sheet asset, such as described earlier, into the simulation file. This embodiment, can further include entering a balance sheet liability, such as described earlier, into the simulation file. The methods performed by the software means can further include deleting a product from the simulation file and/or the organized system data file.

In one embodiment of the method shown in Figure 5, the method further includes inputting a beta factor into the simulation file. In this embodiment, the method includes performing a simulation, simulating a market value at risk analysis using the base case, the new product, the beta factor, and offering rates or return rates. Here, simulating a market value at risk analysis using the base case, the new product, and the beta factor includes simulating a market value at risk analysis that accounts for a number of optionality features for the assets, liabilities and return rates. Further, simulating a market value at risk analysis

that accounts for a number of optionality features for the assets, liabilities and return rates includes accessing the simulation on-line from a number of remote clients.

- 5 In one embodiment, inputting a beta factor into the simulation file includes inputting a beta factor representing an increase and decrease in basis points for an expected return rate on a product. The methods further include performing a simulation, simulating an income at risk analysis using the base case, the new product, the beta factor, and offering rates or return rates.

Conclusion

- 10 Thus, systems and methods have been described through which an organization can perform more timely and accurate analysis of its current financial holdings, perform better forecasting of proposed financial changes, and implement selected financial changes. The present invention allows an organizational user to perform real-time financial modeling over a secure data network.

What is claimed is:

1. A system facilitating financial modeling, comprising:
a server, wherein the server includes a database having a number of client
5 files, wherein each client file is an organized client data file including a number of
linked web pages which are downloadable and displayable to a client program at a
remote client having a graphical user interface;
an input device coupled to the remote client and on-line to the server;
wherein at least one web page includes a data field for entering a beta
10 factor for an analysis of a client file; and
software means operable on the server and the client program at the remote
client for:
receiving a beta factor from the input device; and
simulating an income at risk analysis using the organized client
15 data file and the beta factor.
2. The system of claim 1, wherein the software means operable on the server
and the client program at the remote client is further operable for simulating a
market value at risk using the organized client data file and the beta factor.
20
3. The system of claim 1, wherein at least one web page includes a listing of
input file balances for a client file and wherein the software means operable on the
server and the client program at the remote client is further operable for modifying
the listing of input file balances.
25
4. The system of claim 1, wherein at least one web page includes an income
at risk report preview for a client file and wherein the software means operable on
the server and the client program at the remote client is further operable for
entering a number of analysis variables into the income at risk report preview.
30
5. The system of claim 1, wherein at least one web page includes a historical
performance analysis for a client file and wherein the software means operable on

the server and the client program at the remote client is further operable for entering a number of analysis variables into the historical performance analysis.

6. The system of claim 1, wherein at least one web page includes a historical
5 interest income analysis for a client file and wherein the software means operable on the server and the client program at the remote client is further operable for entering a number of analysis variables into the historical interest income analysis.

7. The system of claim 1, wherein at least one web page includes a balance
10 sheet composition for a client file and wherein the software means operable on the server and the client program at the remote client is further operable for entering a number of analysis variables into the balance sheet composition.

8. The system of claim 1, wherein the system further includes a filter which
15 organizes an electronically transmitted data file received on-line from a user in non-aggregate format into the organized client data file for storage in the database of the server.

9. The system of claim 8, wherein the software means is further operable on
20 the filter and uses codes in the electronically transmitted data file transmitted from any number of different user platforms to organize the electronically transmitted data file into the organized client data file.

10. A system for financial modeling, comprising:
25 a server, wherein the server includes a database of a number of client files, wherein each client file is an organized system data file including assets, liabilities and return rates, which are downloadable and displayable to a client program at a remote client having a graphical user interface;
an input device coupled to the remote client and on-line to the server; and
30 software means operable on the server and the client program at the remote client for:

setting up a base case using the organized system data file; and
entering a new product into a simulation file.

11. The system of claim 10, wherein software means operable on the server and the client program is further operable for inputting a beta factor into the simulation file.
- 5 12. The system of claim 11, wherein software means operable on the server and the client program is further operable for simulating a market value at risk analysis using the base case, the new product, and the beta factor.
13. The system of claim 11, wherein the software means operable on the server
10 and the client program is further operable for simulating an income at risk analysis using the base case, the new product, and the beta factor.
14. The system of claim 13, wherein the beta factor includes a beta factor for an increase and decrease in basis points for an expected change in a market
15 interest rate.
15. The system of claim 14, wherein entering a new product into a simulation file includes entering a balance sheet asset into the simulation file.
- 20 16. The system of claim 15, wherein entering a new product into a simulation file includes entering a balance sheet liability into the simulation file.
17. The system of claim 10, wherein the software means operable on the server and the client program is further operable for deleting a product from organized
25 system data file.
18. The system of claim 10, wherein the software means operable on the server and the client program is further operable for providing on-line system support.
- 30 19. The system of claim 10, wherein the organized system data file includes a cash flow based organized system data file which is organized to identify a number of optionality features for the assets, liabilities and return rates.

20. The system of claim 10, wherein the software means is further operable for taking a number of changes made in the simulation file and implementing these changes into the organized system data file of a particular client.

5 21. A method for financial modeling, comprising:

accessing a server database on-line from a remote client, wherein the server database has a number of client files, wherein each client file is an organized system data file including assets, liabilities and return rates, and which are downloadable and displayable to a client program at the remote client;

10 inputting a beta factor into the client program at the remote client; and
simulating on-line an income at risk analysis using the organized system data file and the beta factor.

22. The method of claim 21, wherein accessing a server database on-line
15 includes accessing the server database on-line over a secure data network.

23. The method of claim 21, wherein the method further includes simulating on-line a market value at risk using the organized system data file and the beta factor.

20

24. The method of claim 21, wherein the method further includes displaying an income at risk report on a graphical user interface at the remote client.

25. The method of claim 21, wherein the method further includes changing a
25 feature in the organized system data file and displaying a historical performance analysis which accounts for the changed feature on a graphical user interface at the remote client.

26. The method of claim 21, wherein the method further includes changing a
30 feature in the organized system data file and displaying a balance sheet composition on a graphical user interface at the remote client.

27. The method of claim 21, wherein the method further comprises:
electronically transmitting on-line from a remote client to the server a data
file in a non-aggregate format from any number of different user platforms;
5 filtering the data file at the server; and
wherein filtering the data file includes organizing the data file into an
organized, customizable client file which accounts for a number of optionality
features.
- 10 28. The method of claim 21, wherein the method further includes modifying a
return rate for a liability in a client file.
29. A method for performing on-line financial analyses, comprising:
maintaining a server database which has a number of client files, wherein
15 each client file is an organized client data file which is downloadable and
displayable to a client program at a remote client;
setting up a base case using the organized system data file; and
entering a new product into a simulation file.
- 20 30. The method of claim 29, wherein the method further includes inputting a
beta factor into the simulation file.
31. The method of claim 30, wherein the method further includes performing a
simulation, simulating a market value at risk analysis using the base case, the new
25 product, and the beta factor.
32. The method of claim 31, wherein simulating a market value at risk analysis
using the base case, the new product, and the beta factor includes simulating a
market value at risk analysis that accounts for a number of optionality features for
30 the assets, liabilities and return rates.
33. The method of claim 32, wherein simulating a market value at risk analysis
that accounts for a number of optionality features for the assets, liabilities and

return rates includes accessing the simulation on-line from a number of remote clients.

34. The method of claim 30, wherein inputting a beta factor into the simulation
5 file includes inputting a beta factor representing an increase and decrease in basis points for an expected return rate.

35. The method of claim 29, wherein entering a new product into a simulation
file includes entering a balance sheet asset into the simulation file.

10

36. The method of claim 29, wherein the method further includes providing
on-line server database support.

37. A computer readable medium having computer executable instructions to
15 cause a computer to perform a method comprising:

accessing on-line a server database which has a number of client files,
wherein each client file is an organized system data file including assets, liabilities
and return rates, and which are downloadable and displayable to a client program
at a remote client;

20 inputting a beta factor into the client program at the remote client; and
simulating an income at risk analysis using the organized system data file
and the beta factor.

38. The computer readable medium of claim 37, wherein the method further
25 includes simulating a market value at risk using the organized system data file and
the beta factor.

39. The computer readable medium of claim 37, wherein the method further
includes:

30 electronically receiving on-line a data file transmitted from the remote
client in a non-aggregate format;
filtering the data file; and

wherein filtering the data file includes organizing the data file into an organized system data file from the non-aggregate format from any number of different user platforms.

5 40. The computer readable medium of claim 37, wherein the methods further include modifying a return rate for a demand deposit account liability for a client file.

41. A computer readable medium having computer executable instructions to
10 cause a computer to perform a method comprising:

maintaining a server database which has a number of client files, wherein each client file is an organized system data file including assets, liabilities and return rates, and which are downloadable and displayable to a client program at a remote client;

15 setting up a base case using the organized system data file; and
entering a new product into a simulation file.

42. The computer readable medium of claim 41, wherein the method further includes inputting a beta factor into the simulation file.

20

43. The computer readable medium of claim 42, wherein the method further includes simulating an income at risk analysis using the base case, the new product, and the beta factor.

25 44. The computer readable medium of claim 43, wherein simulating an income at risk analysis using the base case, the new product, and the beta factor includes simulating an income at risk analysis that accounts for a number of optionality features for the assets, liabilities and return rates.

30 45. The computer readable medium of claim 42, wherein the method further includes simulating a market value at risk analysis using the base case, the new product, and the beta factor.

46. The computer readable medium of claim 42, wherein inputting a beta factor into the simulation file includes inputting a beta factor representing an increase and decrease in basis points for an expected return rate.

5 47. A system, comprising:
a server coupled to the Internet;
a website stored on the server; and
software means operative on the website, wherein the software means
receives on-line a data file in a non-aggregate format, and performs a number of
10 financial analyses on the data file.

48. The system of claim 47, wherein the software means operative on the website which performs a number of financial analyses on the data file includes modifying an offering rate for a balance sheet liability.

15

49. The system of claim 47, wherein the software means operative on the website which performs a number of financial analyses on the data file includes entering a new product into a simulation file.

20 50. The system of claim 47, wherein the software means operative on the website which performs a number of financial analyses on the data file includes performing an income at risk analysis using a beta factor.

51. A system facilitating financial modeling, comprising:
25 a server, wherein the server includes a database having a number of client files, wherein each client file is an organized client data file including a number of linked web pages which are downloadable and displayable to a client program at a remote client having a graphical user interface;
an input device coupled to the remote client and on-line to the server;
30 wherein at least one web page includes a data field for entering a beta factor for an analysis of a client file; and

a financial analysis module executed by the server, wherein the financial analysis module receives the beta factor from the input device, and performs an income at risk analysis using the organized client data file and the beta factor.

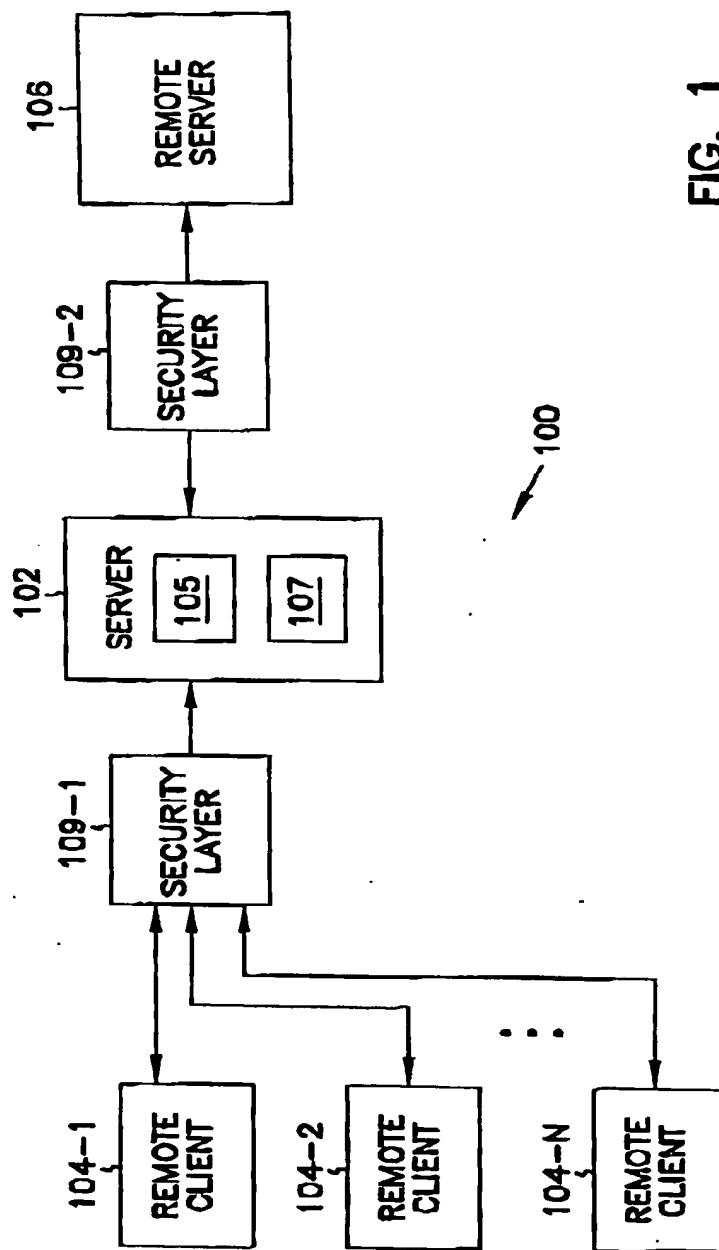
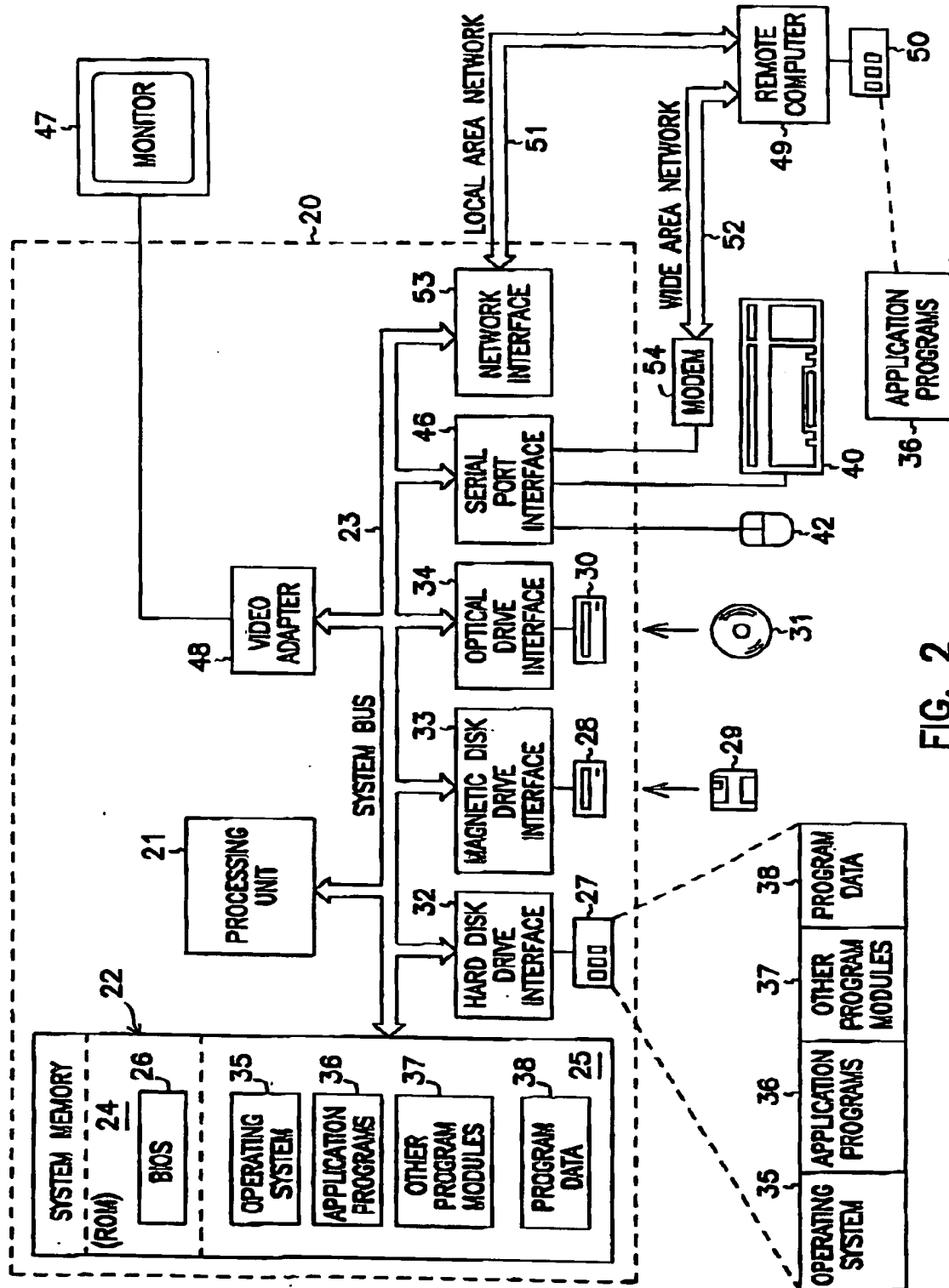


FIG. 1

Gowling, Strathy & Henderson



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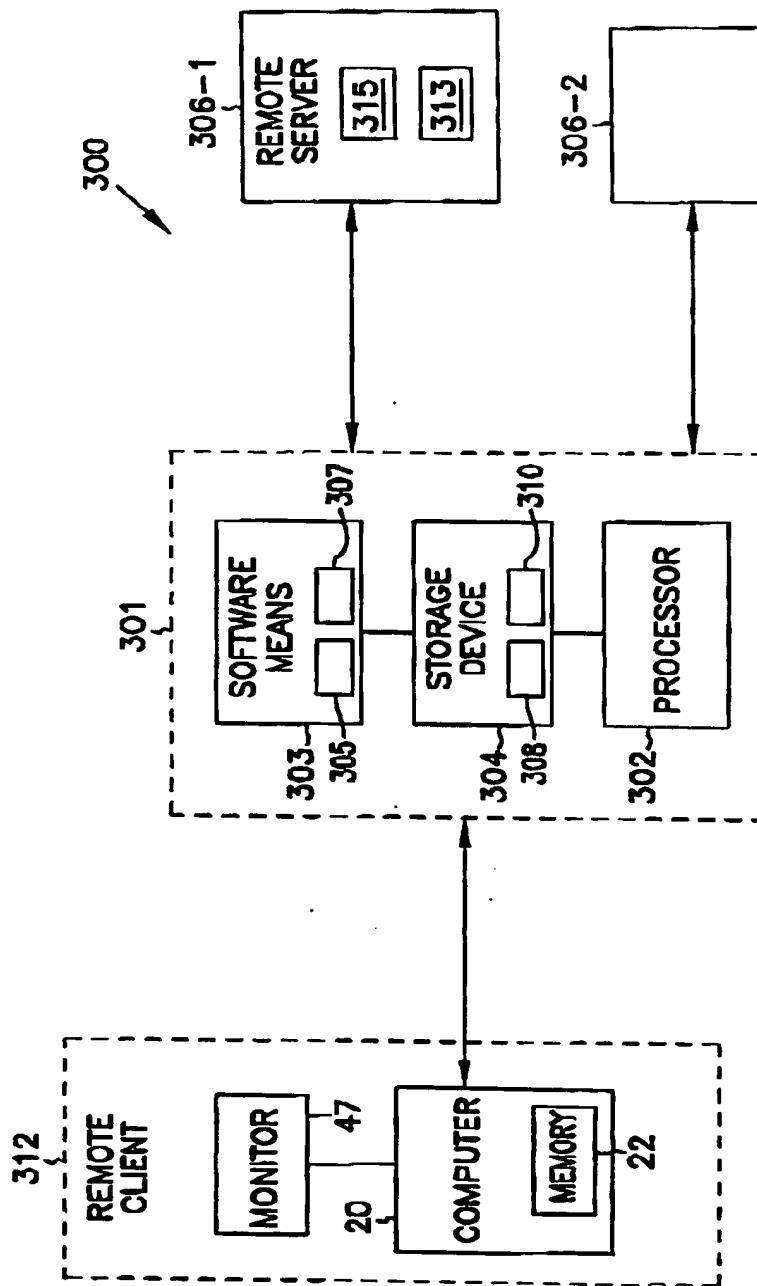


FIG. 3

Gowling, Strathy & Henderson

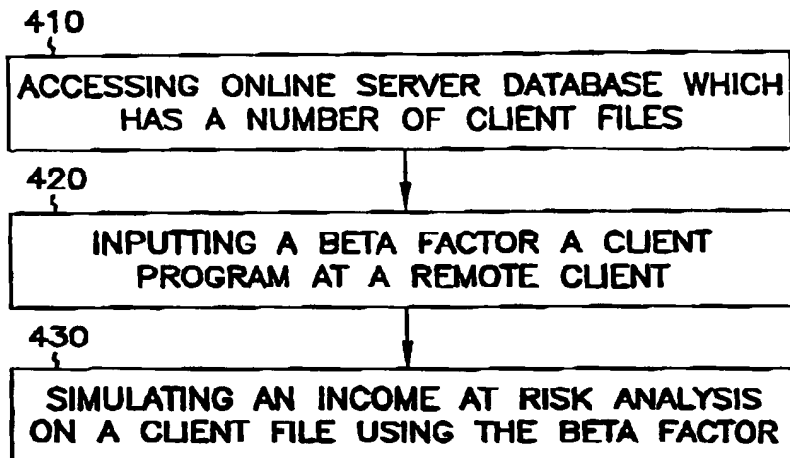


FIG. 4A

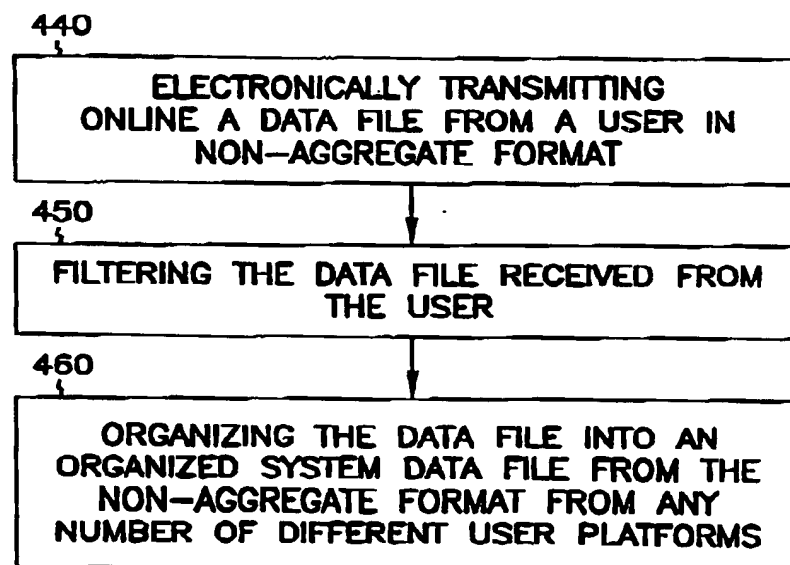


FIG. 4B

Gowling, Strathy & Henderson

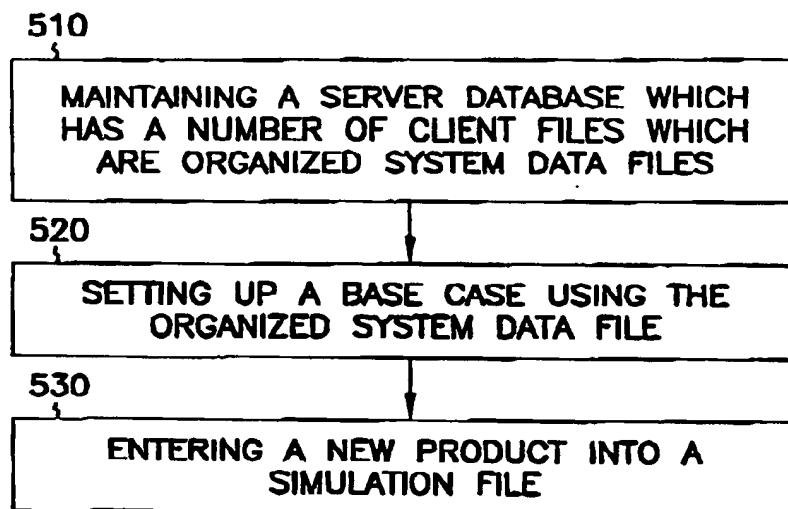


FIG. 5

Gowling, Strathy & Henderson



PALMSSM
PortPro Asset Liability Management System

Loan Spreads Maintenance

-Production System-

User: portpro-ddm Viewing: 6125551234-Digital Visions, Inc.

Save Exit

Select Index Code Select

Index Name	11 - MMDA Tier 1			
Current Offer Rate	0.00	Down *Beta*	0.000	Up *Beta*
			0.000	0.000

F16.6

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Sample Bank - Base Case
Sample City, USA
Balance Sheet Composition

DIGITAL VISIONS™

	Balance	% of Total Assets	Balance %			% Repricing			
			Fixed	Variable	Non Rate Sensitive	<1 Yr	1-3 Yr	3-5 Yr	>5 Yr
Assets									
Cash and Due	350,000	0.80%			100.00%	100.00%			
Fed Funds Sold	2,500,000	6.68%		100.00%		42.74%	35.76%	21.50%	
Secs w/Identified Options	3,313,000	7.53%				31.75%	27.72%	32.51%	8.01%
Other Secs	9,783,000	22.24%	91.73%	8.27%		32.53%	37.26%	28.87%	3.35%
Loans	26,300,000	61.14%	73.75%	26.25%	100.00%				
Fixed Assets	990,000	2.18%			100.00%				
Other Assets	200,000	0.45%			100.00%				
Total Assets	43,996,000	100.00%	73.02%	23.67%	3.41%	37.12%	32.75%	26.17%	3.96%
Liabilities									
Non-Mkt Deposits	20,500,000	46.46%		100.00%		100.00%			
CDs <100M	10,000,000	22.73%	100.00%			80.00%	7.00%	3.00%	
CDs >100M	4,000,000	9.09%	100.00%			75.00%	15.00%	10.00%	
Other Deposits	-	0.00%							
Borrowed Funds	-	0.00%							
Demand Deposits	5,000,000	11.38%			100.00%				
Other Liab	998,000	2.25%			100.00%				
Total Liabilities	39,998,000	90.91%	35.00%	60.01%	14.99%	94.12%	3.82%	2.05%	0.00%
Total Equity Capital	4,000,000	9.09%							
Total Liab & Equity Capital	43,998,000	100.00%							

Fig. 7

Gowling, Strathy & Henderson

Sample Bank - Base Case
Sample City, USA
Projected Income at Risk

DIGITAL VISIONS™

	Current	Down 200	Down 100	Flat	Up 100	Up 200
Position (Annualized)						
Interest Income	4,202,000	4,076,957	4,189,140	4,244,020	4,287,070	4,350,784
Interest Expense	1,282,000	1,218,920	1,243,758	1,268,180	1,285,045	1,301,108
Net Interest Income	2,920,000	2,857,038	2,945,382	2,975,840	3,002,025	3,049,676
Net Change in NII	N/A	(82,964)	(4,657)	54,840	92,026	129,676
% Change in NII	N/A	-2.16% OK	-0.16% OK	1.88% OK	3.15% OK	4.44% OK
ALCO Guideline/Status	<10.00%	OK	OK	OK	OK	OK
Net Interest Margin	4.80%	4.07% OK	4.56% OK	5.05% OK	5.37% OK	5.69% OK
ALCO Guideline/Status	>4.00%	OK	OK	OK	OK	OK
Return on Assets	1.25%	1.11% OK	1.24% OK	1.37% OK	1.48% OK	1.54% OK
ALCO Guideline/Status	>1.00%	OK	OK	OK	OK	OK
Return on Equity	13.75%	12.48% OK	13.63% OK	15.12% OK	16.05% OK	16.99% OK
ALCO Guideline/Status	>12.00%	OK	OK	OK	OK	OK
Yield on Earning Assets	8.89%	9.59%	9.79%	9.89%	10.11%	10.24%
Cost of Funds	3.41%	3.13%	3.19%	3.25%	3.29%	3.34%
Spread	5.48%	6.47%	6.60%	6.73%	6.82%	6.90%

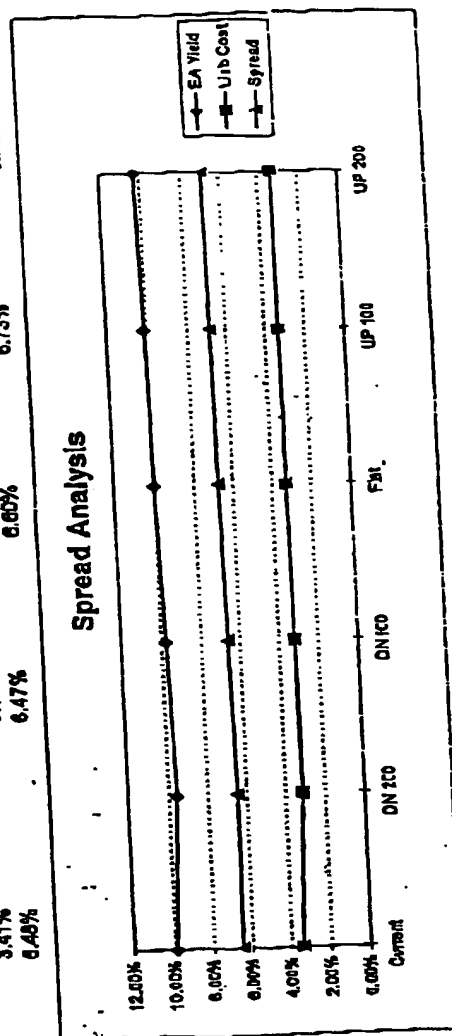


FIG. 8

Gowling, Strathy & Henderson

Sample Bank - Base Case
Sample City, USA
Projected Value at Risk



	Book Value	Down 200	Down 100	Market Value	Up 100	Up 200
Non Earning Assets						
Federal Funds Sold	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
Investments	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000
Loans	13,098,000	13,734,000	13,487,000	13,284,000	13,036,000	12,807,000
Total Assets	26,900,000	27,492,000	27,220,000	26,950,000	26,880,000	26,413,000
	43,998,000	45,228,000	44,707,000	44,214,000	43,716,000	43,220,000
Demand Deposits						
Non Maturity Deposits	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000
Other Deposits	20,000,000	20,000,000	20,000,000	20,000,000	20,000,000	20,000,000
Borrowings	14,000,000	14,300,000	14,150,000	14,025,000	13,850,000	13,700,000
Total Liabilities	39,000,000	39,300,000	39,150,000	39,025,000	38,850,000	38,700,000
	998,000	998,000	998,000	998,000	998,000	998,000
Total Liabilities	39,998,000	40,298,000	40,148,000	40,023,000	39,848,000	39,696,000
Equity	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000
Net Portfolio Values	4,000,000	4,990,000	4,581,000	4,193,000	3,870,000	3,524,000
\$ Change from Book		990,000	661,000	193,000	(130,000)	(476,000)
% Change from Book	0.00%	23.25%	14.03%	4.83%	-3.25%	-11.90%
NPV Ratio	8.09%	11.21%	10.37%	9.63%	8.80%	8.01%
Upper Policy Limit	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%
Lower Policy Limit	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%
Status	OK	OK	OK	OK	OK	OK

Fig. 9

Gowling, Strathy & Henderson

Sample Bank - Base Case Sample City, USA Historical Performance Analysis

DIGITAL VISIONS™

	Current Month	Prior Month	Three Months Prior	Six Months Prior	1 Year Prior
Balance Sheet					
Total Assets	43,898,000	43,840,000	43,950,000	44,100,000	44,000,000
Total Loans	28,940,000	28,787,000	27,300,000	27,600,000	27,750,000
Total Deposits	39,090,000	39,225,000	38,100,000	39,340,000	39,500,000
Total Equity	4,000,000	3,900,000	3,950,000	3,960,000	3,945,000
Earning Assets/TA	88.58%	88.26%	88.49%	88.83%	88.60%
Equity/Assets	9.05%	9.08%	8.96%	8.95%	8.97%
LT/Dep	88.97%	88.69%	89.82%	89.87%	70.25%
Int Bng Dep/Tot Dep	87.18%	88.68%	88.68%	88.61%	88.05%
Earnings					
EA Yield	8.61%	8.78%	8.55%	8.57%	8.61%
Cost of Funds	3.41%	3.37%	3.34%	3.30%	3.32%
Spread	6.48%	6.39%	6.20%	6.26%	6.29%
Margin	6.50%	6.45%	6.47%	6.45%	
Yield on Loans	12.21%	12.35%	12.21%	12.08%	12.15%
Yield on Investments	8.99%	8.95%	8.89%	8.83%	8.85%
Cost of COs	5.43%	5.34%	5.28%	5.23%	5.25%
Overhead	2.92%	2.93%	2.90%	2.87%	2.89%
ROA	1.25%	1.22%	1.21%	1.20%	1.20%
RDE	12.60%	12.35%	12.35%	12.10%	12.15%

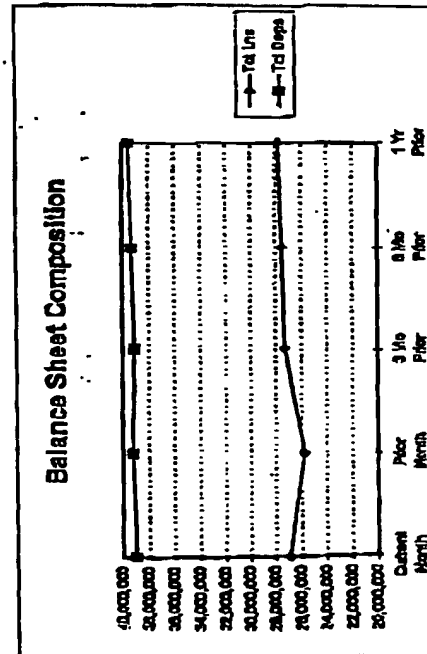
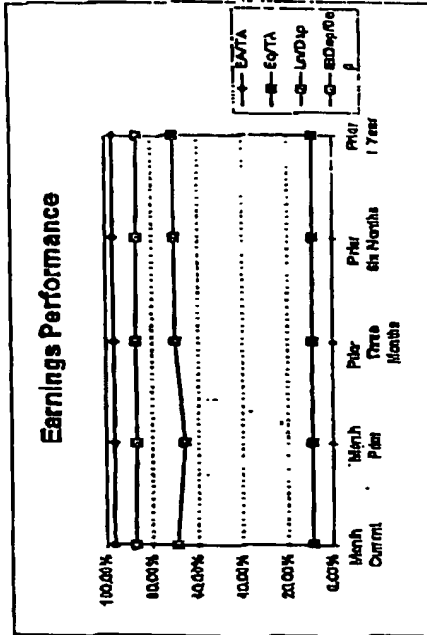


Fig. 10

Gowling, Strathy & Henderson

Sample Bank - Base Case
Sample City, USA
Historical Interest Income Analysis



	Current Period AMOUNT	RATE	Prior Period		RATE	VARIANCE			TOTAL
			AMOUNT	RATE		RATE	VOLUME	MIX	
Earning Assets									
Federal Funds Sold	2,800,000	5.35%	3,100,000	5.35%	-	(325)	(31,574)		(32,100)
Investments									
US Governments	6,755,000	5.74%	7,255,000	5.95%	(7.43)	(1,553)	(27,697)		(38,691)
Agencies	4,863,000	6.03%	4,982,000	6.03%	-	(1,181)	1,181		(12,616)
Municipals	1,168,000	6.49%	1,388,000	6.29%	(116)	(282)	(12,116)		0
Other/CDs	200,000	5.74%	200,000	6.71%	-	(46)	45		
Loans									
Real Estate Loans	6,260,000	8.48%	6,467,000	9.61%	(72.60)	(2,358)	(16,551)		(93,119)
Commercial Loans	6,325,000	9.73%	6,276,000	9.72%	833	(2,004)	8,394		5,383
Consumer/Credit Cards	9,600,000	16.06%	9,285,000	16.07%	980	(6,053)	217,319		212,281
Agricultural Loans	4,100,000	11.46%	4,140,000	11.67%	(7.28)	(1,980)	(2,768)		(12,048)
Other	1,859,000	13.84%	1,600,000	14.03%	(9.83)	(687)	4,410		(3,150)
Other	-	0.00%	-	0.00%	-	-	-		-
Total Earning Assets	42,488,000	9.84%	42,686,000	9.76%	(92.696)	(16,626)	137,165		27,760
Interest Income	4,188,665		4,161,965						
Interest Bearing Liabilities									
Deposits									
MMDA	8,000,000	2.76%	7,920,000	2.75%	-	(85)	2,240		1,375
NOW	7,000,000	1.10%	6,925,000	1.10%	-	(83)	1,126		825
Other Saving Dep	6,000,000	2.00%	6,175,000	2.60%	-	(93)	(9,107)		(3,500)
CDs Under \$100K	10,000,000	5.05%	10,675,000	5.02%	3,000	(1,973)	(31,912)		(30,865)
CDs \$100K & Greater	4,000,000	6.40%	3,600,000	6.30%	4,000	(990)	32,480		35,500
Other Deposits	-	0.00%	-	0.00%	-	-	-		-
Borrowed Funds	-	0.00%	-	0.01%	-	-	-		-
Total Liab	34,000,000	3.41%	34,225,000	3.37%	7,000	(4,523)	638		3,316
Interest Expense	1,168,000		1,164,885						
NIM	2,651,665		2,607,220		(99,550)	(12,305)	135,346		21,416

NIM Variance **24,446**

FIG. 11

Gowling, Strathy & Henderson



PALMS™
PortPro Asset Liability Management System

Simulation Status

-Production System-

User: portpro-ddm Viewing: 6125551234-Digital Visions, Inc.

End

Submitted Simulations
 (waiting to execute)

09/01/98-Simulation 9
 --end data--

Completed Simulations
 (reports ready to view)

09/01/98-lower savings
 09/01/98-core deposit rate
 09/01/98-*Create New Simulation*
 --end data--

Simulations Held
 (but not executed)

09/01/98-Simulation 10
 09/01/98-Simulation 8
 09/01/98-Simulation 7
 09/01/98-Park National
 09/01/98-Simulation 6
 09/01/98-CD Increase Loan Increase
 08/01/98-Simulation 1
 --end data--

FIG. 17

Gouling, Strathy & Henderson



PALMS™

PortPro Asset Liability Management System

Simulate Loans Maintenance

-Production System-

User: portpro-ddm Viewing: 5736954441-Bank of Boothel

Since 11/1/99

Simulation Record Information

Commercial Items

Product Code:

Vehicle Loan

Increase/Decrease Amount:

1000000

Simulation Rate:

1

Change Frequency:

Monthly

Rate Ceiling:

0

Rate Floor:

0

Fed Call Code:

-Select Fed Call Code-

Maturity Date:

Next Reset Date:

Index Code:

-Select Index Code-

Spread:

0

Cap:

0

FIG. 13A

Goulding, Strathy & Henderson



PALMS™

PortPro Asset Liability Management System

Simulation Category Maintenance

-Production System-

User: portpro-ddm Viewing: 5736954441-Bank of Botheel

Submit Exit

Modify Simulation Offering Rates

Record ADDED

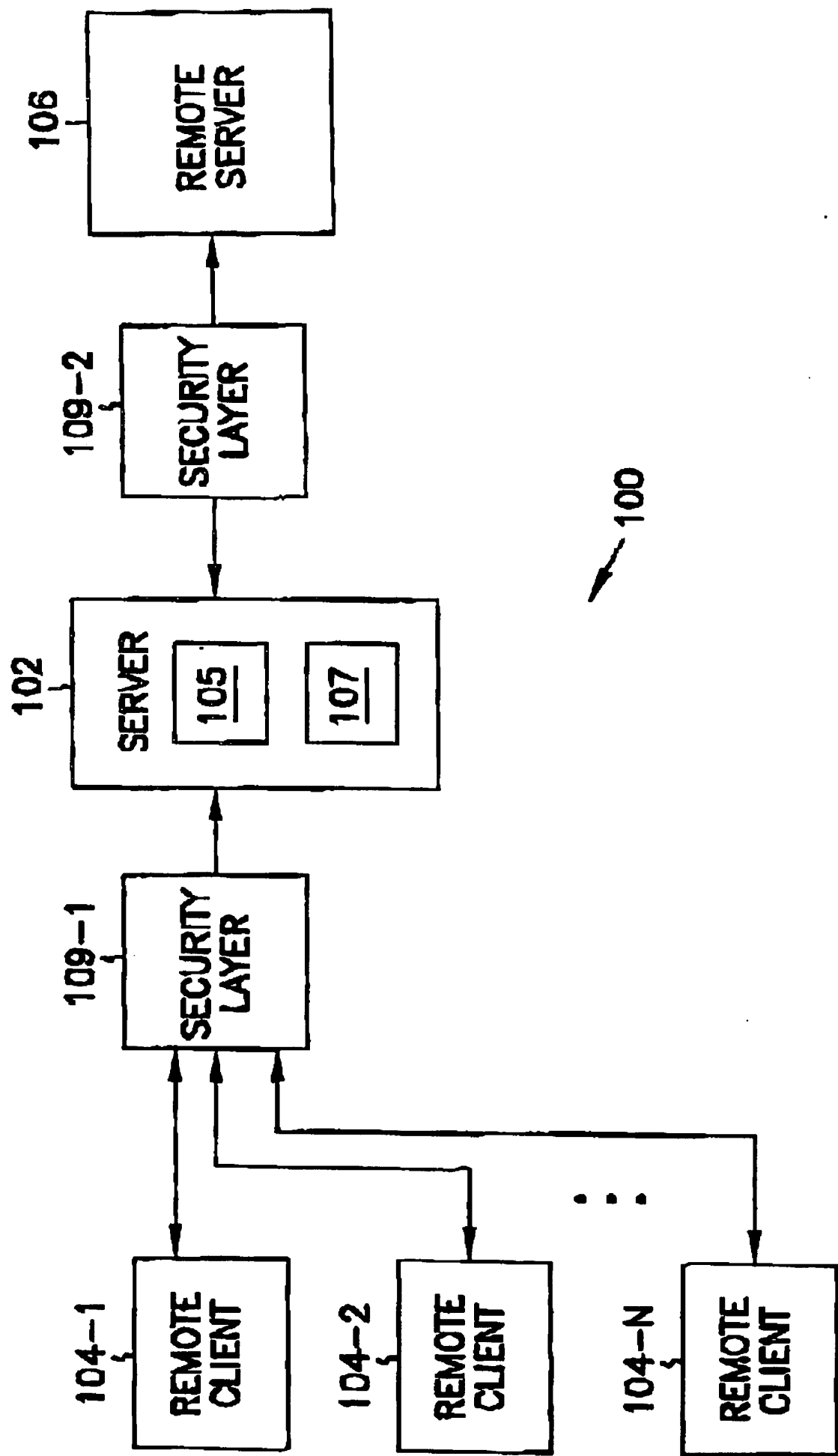
May 1999 Simulation 1														
Name		Commercial Loans		Add										
Product Type	Chg/Del	Cur Balance	Prod Code	Est Code	Cur Rate	Maturity Date	Next Resd	Change Freq	Index Code	Rate Ceiling	Rate Floor	Cap	Spread	
Commercial Loans	● ●	\$1,000,000.00	02	01	9.000%	12/1/2004	12/1/99	03	01	15.000%	2.000%	0.000%	200	
Clear Funding Assets		Fed Funds Sold		Add										
Product Type	Chg/Del		0-1m	1-2m	2-3m	3-6m	6-12m	1-2y	2-3y	3-5y	5-10y	10-20y	420y	FBS
Core Deposits		DDA		Add										
Product Type	Chg/Del	Cur Balance	Prod Code	Cur Rate	Index Code									
DDA	● ●	\$1,000,000.00	03	0.000%	08									
Time Deposits		CDs Over 100M-Partial		Add										

FIG. 13B

Gowling, Strathy & Henderson

[illegible]

Gowling, Strathy & Henderson



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